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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of)
)
Mitigation of Orbital Debris) IB Docket No. 02-54

COMMENTS OF AON SPACE, Inc. (A Division of Aon Corporation)

Introduction

AON Space, Inc. ("AON"), by its attorneys, and pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§1.415 and 1.419, hereby comments on the Notice of Proposed Rulemaking ("NPRM"), IB Docket No. 02-54 of the Federal Communications Commission (the "Commission"). AON is engaged in the placement of insurance for various space activities by commercial entities, primarily commercial telecommunications systems. By its NPRM the Commission proposes to adopt rules for satellite services concerning orbital debris mitigation¹. The Commission seeks comment on whether the Commission would have the authority to either adopt a rule, or in individual cases, to impose a licensing condition that would require licensees to obtain liability insurance to adopt debris mitigation or related issues.² (emp. added)

The Commission specifically seeks comment on whether different types of risks may differ with respect to whether they can be appropriately addressed through insurance.³ Although herein we will only address the insurance issues only, we appreciate the opportunity to comment on the many topics presented in the NPRM.

¹ NPRM ¶ 1
² NPRM ¶ 33
³ NPRM ¶ 61

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I. AON Space, Inc.

Aon Space is a subsidiary of the Aon Corporation, which is recognized worldwide as a risk-advisory industry leader. Aon Space is wholly dedicated to the risk management of space related projects. The Aon Space team is staffed with highly experienced individuals with strong backgrounds in insurance, finance, contracts and engineering. Main offices are located in Washington D.C., London, and Paris to access specialized insurance companies worldwide.

Aon Space's charter is to provide comprehensive risk analysis and formulate risk management solutions that meet with the objectives of the client throughout all phases of their program, including but not limited to the following:

- Regulatory Licensing Issues
- Pre-launch
- Launch
- In-orbit
- Third Party Liability
- Value Added Services – Such as Contract Negotiation, Technical Expertise, and IPO and Investment services.

Given the breadth and depth of Aon Space's involvement in the insurance and risk management aspects of the entire cycle of satellite provided services--from construction, launch, operation, to end-of-life--we feel qualified to provide the Commission with our views of the proposals in the NPRM related to insurance requirements as part of an overall licensing regime for telecommunications satellites.

II. Nature of the Space Insurance Industry

Liability insurance requirements for commercial space operations are a result of international law⁴, domestic law⁵ and policy⁶, and the concerns of private investors. In the United

⁴ *Outer Space Treaty*, Art. VI; and *the Liability Convention*

⁵ *Commercial Space Launch Act, as amended*, 49 USC 70101 et seq. (hereinafter CSLA)

⁶ National Space Policy of 1996

States, a number of federal regulations impose conditions to licensing space activities by US nationals, including insurance requirements.⁷

International liability, established by various treaties and generally accepted principles of international law, imposes responsibility for the activities of its nationals in the governments of space faring nations. Under these principles, and absent any domestic law to the contrary, the space activities of private actors remain the international obligations of government. This is true even though commercial space operations may also be subject to claims against the private actors under the law of a nation in which their activities causes damage to persons or property.

In addition to claims caused by commercial space activities, space actors must protect against various losses, such as but not limited to, the destruction of a satellite in space or at time of launch, failure of the satellite to achieve proper orbit, unreasonable delay of a launch that results in economic harm, and other economic losses after the satellite is in orbit.

Participants in a commercial space activity include: the launch service provider; the launch customer; the launch facilities provider; and numerous contractors and sub-contractors. The participants face two types of insurable risks. First, there are “first-party risks”: risk of damage to their own property and injury suffered by their employees. Secondly, there are, “third- party risks”: risks of legal liability arising from the acts and omissions of a participant, which may cause injury, loss, or damage to non-participants.⁸ Without insurance, the accumulation of risk for liability would be prohibitive for all but the wealthiest corporations. Even with insurance, potential liability for each insured event could exceed the maximum amount of insurance coverage available on the world market to the commercial users at reasonable cost.

The availability and the forms of insurance have greatly expanded since the early days of space operations.⁹ Today in the United States, minimum liability insurance requirements for

⁷ Federal Aviation Administration Regulations 14 C.F.R. § 400 et.seq.; and Licensing of Private Land Remote Sensing Space Systems 165 Fed. Reg. 46822

⁸ By agreeing to a no-fault, no-subrogation, inter-party waiver of liability, claims by other launch participants (Second party Liability) is largely avoided . Each party agrees not to sue the other, and also to absorb the financial and other consequences of damage it may suffer.

⁹ The first space insurance policy was sold in 1965 for Comsat's Intelsat I, (also known as Early Bird), the first commercial geo-stationary communications satellite. Such operations were considered largely uninsurable because launch vehicles were considered unreliable, and satellites experimental.

commercial space launchers are set out in the CSLA. Prior to enactment of the insurance provisions of the CSLA, private launch companies were liable for any damage that exceeded their insurance. Just one accident could be enough to bankrupt an entire company. The CSLA requires the licensing of all commercial space launches in the United States, or by a U.S. citizen from outside the United States (assuming the absence of an agreement between the United States and the launching state). The CSLA's insurance, requirements set out maximum insurance policy limits for launch licensing. They include: third-party liability insurance for death, bodily injury, property damage, or loss resulting from an activity carried out under license; and insurance for United States government claims for damage or loss to Government property resulting from an activity carried out under the license. The CSLA also sets a maximum limit on the amount of insurance required for one launch, \$500 million for death, bodily injury, and property damage, and \$100 million for damage to government property; or the maximum amount of insurance available on the world market at, reasonable cost if the amount is less than the applicable amount for \$500 million. These limits, however, apply only to successful claims related to one launch. The reason for this generous policy by the United States government appear to be that even without government indemnification, U.S involvement in commercial launch activities raises the possibility that the government could be liable in the event of a launch failure.

Under the CSLA's licensing regime, not all US commercial space launches require insurance to be granted a license. If liability insurance is not available for bodily injury and property damage to Third Parties, and the licensee can otherwise demonstrate financial responsibility to meet the maximum probable loss standard, the DOT may still authorize the launch. Permission to launch where the insurance and financial responsibility is less than the prevailing conditions in the world insurance markets must be fully justified by the prevailing conditions in the world insurance markets by proof that the operator involved has obtained all of the insurance possible for that particular launch and has offered the maximum amount of financial responsibility within the bounds of sound business.

Today, thanks to the United States government's indemnification statutes, satellite operators have a wide-range of insurance products available to insure their operations. Generally, the satellite is insured under a series of insurance policies that follow the sequence of events in

its life, which can be divided into three main phases: pre-launch (manufacturing, transit, integration); launch; and in-orbit operation which can be broken down into in-orbit commissioning and in-orbit life. In practice, coverage for the in-orbit commissioning phase and initial in-orbit risk can be included in the launch policy, which may cover up to a 12-month period from launch vehicle intentional ignition. From that point a separate policy, or policies, cover the remaining in-orbit life. This may also include a policy protecting against liability claims resulting from de-orbiting operations.¹⁰

In this entire process, certain factors must be remembered. First is that the world capacity for insuring space launches, or any event, are limited. Currently less than one billion dollars of theoretical capacity is available to insure first party losses, with actual usable capacity up to four hundred million.¹¹ Recent satellite loss history has lead to further tightening of available insurance capacity. Given the potential for losses in the hundreds of millions of dollars, this amount is often inadequate during periods of robust space activities. Third party capacity is slightly higher, estimated to be in the range of \$1-1.5 Billion before September 11.¹² Currently, the capacity may have been reduced to \$600 Million to \$1 Billion.

Second, the majority of the underwriting for space launches and satellite coverage originates outside the United States.¹³ Any department, agency, or commission of the United States government desiring to impose regulatory controls over the US space industry by including insurance requirements should recognize the fact that the foreign markets will have a great deal of influence over the availability and cost of such a requirement.

Third, the premiums associated with the various phases described above are related to the risks involved. Pre-launch insurance is much cheaper than the actual launch; even though the launch lasts a short time—because the risks are geometrically higher. And, there has never been a

¹⁰ While de-orbiting operations may have obtained insurance in the past, market conditions have changed. Such coverage may not be available in the future with similar terms and conditions, if at all.

¹¹ See Liability Risk Sharing Regime for US Commercial Space Transportation: Study and Analysis, April 2002, at 3-21. (hereinafter "FAA Report")

¹² FAA Reptot Appendix D, page 4.

¹³ Approximately 25% of the market is in the United Kingdom, 25% is located in continental Europe, 25% in the United States, and the remainder distributed around the world.

third party claim against a US launch¹⁴; therefore, the statutory requirement is met for a lower premium than the premium for the loss of a satellite.

III. Commission Requests Related to Insurance Requirements

In the NPRM, the Commission seeks comment on a number of issues related to insurance requirements that address debris mitigation or related issues.¹⁵ Initially, the Commission questions whether it has the authority to adopt a rule, or in an individual case impose a licensing condition, requiring licensees to obtain insurance. At this time, we will decline to comment on whether the Commission has such authority, but for the purposes of discussion we will assume that the Commission does have such authority. In posing the question, we ask the Commission to consider whether the proper inquiry is not whether the Commission could impose the requirement, but rather given the nature of the insurance industry and current market conditions, the Commission should impose such a requirement. The commission presented a brief review of the agency licensing authority related to launch safety, national security, foreign policy, science policy, and insurance requirements.¹⁶ No other agency has taken the dramatic step that the Commission suggests might be appropriate, i.e., mandatory de-orbiting insurance. All of the satellites ever launched since the beginning of the Space Age has, or will require some end of life disposal procedure. Many will just remain in space in “disposal” orbits. Today, we are witnessing a desire for the removal of low earth orbit of multi-satellite constellations, which paradigmatically has many ramifications. Insuring the de-orbiting, and the ability to do so, is but one of them. The Commission might be placing a great burden on the domestic telecommunications satellite industry if it implements licensing requirements as suggested in the NPRM. As described above, the international market for satellite insurance is limited. By imposing mandatory insurance requirements far in advance of the end of life of satellites, the Commission would restrict the future availability of capacity as funds were reserved for possible losses insured at the time of licensing.

¹⁴ FAA Report at D-4

¹⁵ NPRM ¶ 33, 60 and 61

¹⁶ NPRM ¶ 14

There is some question as to whether the insurance industry would respond to the notion that de-orbiting efforts in the remote future, which have little or no history, can be insured. As described above, the launches of telecommunications satellites on domestic or foreign launch vehicles is an insurable event that has the highest degree of risk, and hence the highest rate of premium. The degree of risk is associated with the known failure rate of the launch vehicles and in some cases, the launch service providers.

In the case of de-orbiting maneuvers, there is little experience with the techniques that are successful. Underwriters will impose a substantial premium, if coverage is provided at all, on the fact that the de-orbiting will take place in the future, with yet to be proved techniques, with no or little history of success, and with no comparable underwriting experience. As the Commission points out, the launching state remains ultimately absolutely¹⁷ liable for damage caused by space objects on the surface of the earth or aircraft. This is an international responsibility that the United States adopted as part of the regime governing space activities. For good reason, the United States has legislation that reduces the burden on the taxpayer. However, the ultimate responsibility remains with the government. In this case, for the foreseeable future, it may be preferable for the United States to continue to accept responsibility.

Shifting the burden of risk to the private sector has attractive aspects that may be short sighted in their application. There is no guarantee that the international market will follow the lead of the Commission and make available adequate capacity at a reasonable cost of insurance for events that are far in the future. Rather, we would urge the Commission to refrain from imposing any mandatory licensing requirements in the instant case and to determine at a later date whether the imposition of insurance requirements is (1) consistent with the debris mitigation policies of other federal agencies; (2) the international insurance markets will sustain the additional burdens of any requirement for insurance related to de-orbiting activities; and (3) the Commission has the authority, which can be exercised, to impose similar requirements on the foreign competitors to US telecommunications services.

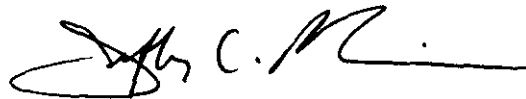
¹⁷ The Commission correctly pointed out in ¶ 21 of the NPRM that the Liability Convention establishes absolute liability as a standard for damage to the surface of the Earth or aircraft in flight. We note that in ¶ 60 of the NPRM, the Commission describes this as strict liability. The two standards are similar but the difference is important. For purposes of this comment, we have applied the standard of absolute liability in our analysis

IV. Conclusions

Aon Space Inc. respectfully requests that the Commissions defer imposing any additional insurance requirements in the proposed rule making until the the effect of such a requirement can be determined.

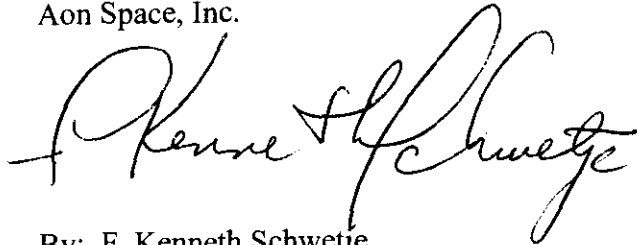
Respectfully submitted,

AON Space , Inc.



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